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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/561,312

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EXAMINER

RO, BENTSU

ART UNIT

PAPER NUMBER

2837

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/561,312	SIEBER ET AL.	
	Examiner	Art Unit	
	/Bentsu Ro/	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-13 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/19/05</u> . | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 2837

FIRST OFFICE ACTION

1. For beneficial reason, the function of the boxes in each of Figs. 1, 7-10 should be labeled. For example, label Fig. 1, box 8 as "motor"; box 10 as "signal transducer"; Fig. 9, box 40 as "contact pressure determination"; etc. If the box is too small, the legend can be placed outside the box.

2. Claim 14 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim.

See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 2, 5, 7-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims are rejected because of the following reasons:

- Claim 2, line 2, the recitation "in particular" is indefinite.
- Claim 1, line 2 has defined "a sensor unit"; claim 2, line 4 further defines "a sensor unit". It is unclear that the sensor unit of claim 2 is the same as that of the "sensor unit" of claim 1. If they are different, differentiating these two sensor

Art Unit: 2837

units is required. If they are same, then change claim 2, the "a sensor unit" to -- the sensor unit--.

- Claim 5 should be amended to depend on claim 4 because the current measuring device is defined in claim 4, not in claim 1.
- Claim 7 should be amended to depend on claim 6 because the optical signal transducer is defined in claim 6.
- Claim 8 should be amended to depend on claim 6 because the acoustic signal transducer is defined in claim 6.
- Claim 9, line 3, the recitation "in particular" is indefinite.
- Claim 9, line 3, the recitation "the speaker" lacks antecedent basis.
- Claim 10 should be amended to depend on claim 2 because the control and/or regulating unit is defined in claim 2.
- Claim 11 should be amended to depend on claim 2 because the control and/or regulating unit is defined in claim 2.
- Claim 12 should be amended to depend on claim 2 because the control and/or regulating unit is defined in claim 2.
- Claim 13, line 2, the recitation "in particular" is indefinite.

The examiner would like to call applicant's attention that claim 14, line 2 and line 7, the recitation "in particular" is indefinite. If applicant amend claim 14, this issue should also be addressed.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2837

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 3, 6, 13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Bean US Patent No. 3,902,283.

Claims read onto Bean's teaching as follows:

The claims:	Bean's teaching:
<p>1. An electric power tool,</p> <p>having an electric motor acting to drive a tool,</p> <p>characterized by a sensor unit,</p> <p>which detects the contact pressure of the tool against a workpiece</p> <p>and cooperates with a signal transducer.</p>	<p>Fig. 1 shows a gem cutting machine, the gem cutting machine is an electric power tool;</p> <p>Fig. 1 shows a rotatable disk (or lap) 26; Fig. 2 shows a facet machine; the lap 26 and the facet machine work together as a tool; the lap is driven by an electric motor, see column 3, lines 44-46;</p> <p>Figs. 1 and 3 show a saddle 40; Fig. 4 shows a strain gage 80 mounted inside the saddle 40; the strain gage 40 is a sensor unit;</p> <p>Fig. 2 shows a gem stone 24, the gem stone 24 is a workpiece; the strain gage 40 detects a contact pressure of the gem stone 24 against the lap 26, see abstract lines 3-4;</p> <p>Figs. 1 and 4 both show a readout meter 64; the readout meter 64 is a signal transducer.</p>
<p>2. An electric power tool, having an electric motor acting to drive a tool, in particular in accordance with claim 1,</p>	<p>same as that of claim 1;</p>

Art Unit: 2837

<p>an having a control and/or regulating unit serving to guide the operation of the electric motor,</p> <p>characterized by a sensor unit, which detects the contact pressure of the tool against a workpiece</p> <p>and cooperate with the control and/or regulating unit.</p>	<p>albeit not shown, at least there is an ON/OFF switch for controlling or regulating the rotation of the electric motor;</p> <p>same as that of claim 1;</p> <p>if the polishing or cut operation is completed, the motor is stopped.</p>
<p>3. The electric power tool in accordance with claim 1, characterized in that the sensor unit has a strain gauge and/or a piezoelectric sensor.</p>	<p>the sensor is a strain gage 80, see Fig. 3.</p>
<p>6. The electric power tool in accordance with claim 1, characterized in that the signal transducer is an optical and/or an acoustical signal transducer and/or a signal transducer that calls on the sense of touch.</p>	<p>the reading of strain gage 80 on the readout meter 64 is a force of contact, thus it is a signal that calls on the sense of touch.</p>
<p>13.</p>	<p>Claim 13 is a method claim similar to that of claim 1, further explanation is not necessary.</p>

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bean.

Art Unit: 2837

Regarding these claims, Bean teaches a readout meter 64 as a signal transducer, Bean does not teach a LED, an acoustic device or a speaker as a signal transducer. However, using LED, acoustic or speaker as a signal transducer is considered an obvious design choice. Bean's readout meter obviously could be replaced by a LED, an acoustic device or a speaker.

9. Claims 1, 2, 3, 6, 13 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kozin et al US Patent No. 6,665,948.

Claims read onto Kozin et al teaching as follows:

The claims:	Kozin et al teaching:
<p>1. An electric power tool, having an electric motor acting to drive a tool,</p> <p>characterized by a sensor unit, which detects the contact pressure of the tool against a workpiece</p> <p>and cooperates with a signal transducer.</p>	<p>Fig. 2 shows a drill bit penetration measurement system which is an electric power tool; the drill is an electric power tool; the drill has an electric motor (not shown);</p> <p>Fig. 3A shows a housing 112 has a piston 128 and a thrust assembly 114, the housing 112 including the piston and thrust assembly is a sensor unit; the workpiece is a cortical bone 10, see Fig. 1A; the sensor unit 112 detects the contact pressure of the tool bit 16 (Fig. 2) against the bone 10;</p> <p>Fig. 3A shows a hydraulic pressure transducer 118 (a second sensor); the transducer 118 is a signal transducer.</p>
<p>2. An electric power tool, having an electric motor acting to drive a tool, in particular in accordance with claim 1,</p> <p>an having a control and/or regulating unit</p>	<p>same as that of claim 1;</p> <p>Fig. 6 shows a control assembly 106;</p>

serving to guide the operation of the electric motor, characterized by a sensor unit, which detects the contact pressure of the tool against a workpiece and cooperate with the control and/or regulating unit.	same as claim 1; Fig. 6 shows the cooperation of second sensor 118 with the control assembly 106.
3. The electric power tool in accordance with claim 1, characterized in that the sensor unit has a strain gauge and/or a piezoelectric sensor.	the sensor can be a piezoelectric sensor 118', see Fig. 4A.
6. The electric power tool in accordance with claim 1, characterized in that the signal transducer is an optical and/or an acoustical signal transducer and/or a signal transducer that calls on the sense of touch.	the second sensor 118 is a sense of touch.
13.	same as that of claim 1.

10. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kozin et al.

Regarding these claims, the examiner believes that all drills have a torque control and a speed control, including the drill of Kozin et al.

Kozin et al do not show torque and speed controls because the torque and speed controls are prior art and are not part of Kozin's invention.

Art Unit: 2837

11. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. Claim 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: No prior art teaches the correlation between a contact pressure of a tool bit and a motor current from a current measuring device.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Any inquiry concerning this communication should be directed to Bentsu Ro at telephone number 571 272-2072.

/Bentsu Ro/
Primary Examiner
Art Unit 2837